REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Official Action dated October 31, 2007. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1, 3-5 and 7-15 are under consideration in this application. Claims 2 and 6 are being cancelled without prejudice or disclaimer. Claims 1 and 3-5, and 7-10 are being amended, as set forth in the above marked-up presentation of the claim amendments, in order to correct formal errors and/or to better recite or describe the features of the present invention as claimed. New claims 11-15 are being added.

All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Formality Rejection

Claims 1-10 were objected to for informalities. Claims 5-7 were rejected under 35 U.S.C. §101 for claiming non-statutory subject matter. As indicated, the claims are being amended as required by the Examiner. Accordingly, the withdrawal of the outstanding informality rejection is in order, and is therefore respectfully solicited.

Prior Art Rejection

Claims 1, 5 and 8 were rejected under 35 U.S.C. §102(e) as being anticipated by Thorsteinson et al. (US 2003/012694), claims 2-4, 6-7 and 9 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Thorsteinson '694 in view of Applicant's Admitted Prior Art ("APA"); and claim 10 was rejected over Thorsteinson '694 in view of Biederman (US 7,006,526). These rejections have been carefully considered, but are most respectfully traversed, as more fully discussed below.

The data delivery server (for example, the embodiment depicted in Figs. 1-2) of the present invention connected to a mobile terminal by way of a network for delivering an IP packet 24 having data packets 22a, 22b recorded internally of payload, as now recited in claim 1, comprises: a search module 1 for determining a maximum value of a size of one IP

packet capable of passing through a channel on said network extending from said data delivery server to said mobile terminal, a packet generating module 4 for determining a number of said data packets to be stored in the payload of the IP packet on the basis of said maximum value of a size of one IP packet and for storing the determined number of said data packets into the payload of said IP packet thereby generating said IP packet without fragmenting said IP packet (p. 5, line 13; "*the packet suffering no fragmentation*" p. 8, line 11), an input/output unit for delivering said IP packet generated by said packet generating module, and a move detecting module designed for accepting a move message of said mobile terminal (claim 2). The search module 1 determines said maximum value of a size of one IP packet depending upon a current channel on a current network (*"exchange or switching of the network doe to the move of the terminal"* p. 9, lines 3-5) connecting between said data delivery server and said mobile terminal after a move of said mobile terminal (*"determining an MTU of a network extending between the server and a receiver terminal upon starting of delivery or dispatch of the data packet*" p. 6, lines 3-5) by sending out one ore more search packets each of which excludes data to be included in the payload of said IP packet (83 in Fig. 8; p. 17, lines 10-14), when the move of said mobile terminal is detected by said move detecting module (claim 2).

The invention of claim 8 is directed to a data delivery system comprised of a server for delivering data including data packets additionally recorded internally of payload of an IP packet and a mobile terminal connected to said server by way of a network for receiving said data. Either said server or said mobile terminal (Embodiment 2; "*the terminal searches the MTU and massage the results of the search to the server*" p. 15, lines 14-15) comprises: the components and functions of the data delivery server of claim 1.

The invention of claim 5 is directed to a data delivery software embedded in a computer readable storage medium to carry out data delivery a microprocessor and an input/output unit of either said server or said mobile terminal of claim 8.

The present invention thus eliminates the fragmentation of IP packet in a communication channel or path thereby preventing increase of load imposed on *network appliance* from increasing due to fragmentation in a heavy traffic situation. The present invention also prevents increase of a load imposed on a *receiver terminal* due to reconstruction or restructuralization of the fragmented packet (p. 5, lines 12-12).

Applicants respectfully submit that the cited references and their combination do not teach or suggest that "determining [[the]] a number of said data packets to be stored in the payload of the IP packet on the basis of said maximum value of a size of one IP packet and

for storing the determined number of said data packets into the payload of said IP packet thereby generating said IP packet without fragmenting said IP packet", and "determining said maximum value of a size of one IP packet depending upon a current channel on a current network connecting between said data delivery server and said mobile terminal after a move of said mobile terminal by sending out one or more search packets each of which excludes data to be included in the payload of said IP packet, when the move of said mobile terminal is detected by said move detecting module" as the present invention.

In contrast, Thorsteinson and APA merely decide MTU between two Fixed IP hosts. For example, Path MTU discovery (PMTUD) is a technique in computing for determining the maximum transmission unit ("MTU") size on the network path between two fixed IP hosts with a view to avoiding IP fragmentation. Path MTU discovery works by setting the DF (Don't Fragment) option bit in the IP headers of outgoing packets. Then, any device along the path whose MTU is smaller than the packet will drop it ("try-and-error"), and send back an ICMP "Fragmentation Needed" message containing its MTU, allowing the source host to reduce its assumed path MTU appropriately. The process repeats until the MTU is small enough to traverse the entire path without fragmentation. If the path MTU changes after the connection is set up and is lower than the previously determined path MTU, the first large packet will cause an ICMP error and the new, lower path MTU will be found. Conversely, if PMTUD finds that the path allows a larger MTU than what is possible on the lower link, the OS will periodically re-probe to see if the path has changed and now allows larger packets. On Linux this timer is set by default to ten minutes.

In PMTUD, the update of MTU is caused by the change of a piece of hardware/device along the path, rather than due to the movement of a destination host or a mobile terminal as the present invention. In addition, PMTUD takes a try-and-error approach which actually drop the packets including meaningful payload data. On the other hand, the present invention sends out one ore more search packets each of which excludes data to be included in the payload of said IP packet.

As to the prior art ping, it is also applied between two fixed points (rather than one fixed point vs. one mobile point as the present invention) in a network, such as a computer network, to test whether a particular host is reachable across an IP network. It works by sending ICMP "echo request" packets to the target host and listening for ICMP "echo response" replies. Ping estimates the round-trip time, generally in milliseconds, and records any packet loss, and prints a statistical summary when finished.

Biederman fails to compensate for the deficiencies of Thorsteinson and APA as discussed above.

Applicants contend that the cited prior art references and their combinations fail to teach or disclose each and every feature of the present invention as recited in at least independent claims 1, 5 and 8. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

Conclusion

In view of all the above, clear and distinct differences as discussed exist between the present invention and the prior art references upon which the rejections in the Office Action rely, Applicant respectfully contends that the prior art references cannot anticipate the present invention or render the present invention obvious. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

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